

## EDITED KSA LISTING

### CLASS: SUPERVISING ELECTRICAL ENGINEER

*NOTE: Each position within this classification may be required to possess all or some of these knowledges, skills or abilities.*

	<b>Knowledge of:</b>
<b>K1</b>	Comprehensive knowledge of designing and preparing plans for electrical engineering aspects (e.g., lighting, power, control wiring, substation, low voltage, high voltage, etc.) of projects by utilizing current industry standards in order to provide information to institutions, contractors, suppliers, etc. for quality construction work and accurate as-built drawings.
<b>K2</b>	Comprehensive knowledge of electrical engineering fundamentals (e.g., electrical theory and practice, modern electrical equipment, power distribution, control systems, illumination design, etc.) and mathematics in order to perform various job-functions (e.g., design, construction support, design review, etc.).
<b>K3</b>	Comprehensive knowledge of terminology, various codes, safety orders, rules, laws, regulations, departmental policies and procedures, governing the design and installation of electrical (e.g., lighting, power, control wiring, substation, low voltage, high voltage, etc.) in order to provide design, construction support, and design review, etc.
<b>K4</b>	General knowledge of cost estimates for electrical engineering aspects (e.g., lighting, power, control wiring, substation, low voltage, high voltage, etc.) in order to provide cost effective design work in preparation of plans and specifications.
<b>K5</b>	General knowledge of structural engineering, mechanical engineering, and architectural elements as related to buildings to properly coordinate electrical aspects as it relates to multi-discipline design work.
<b>K6</b>	General knowledge of specification writing for electrical engineering aspects (e.g., lighting, power, control wiring, substation, low voltage, high voltage, etc.) of projects by utilizing current industry standards in order to provide information to institutions, contractors, suppliers, etc. for quality construction work and accurate as-built information.
<b>K7</b>	Comprehensive knowledge of procedures of building construction as it relates to the installation of electrical equipment (e.g., lighting, power, control wiring, substation, low voltage, high voltage, etc.) utilizing current industry standards in order to provide effective design and construction support.

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<b>K8</b>	<b>Basic knowledge of Computer Aided Drafting and Design (CADD) and engineering applications, computer software and hardware in order to provide accurate design work in preparation of preliminary plans, working drawings, technical reports and charts.</b>
<b>K9</b>	General knowledge of the principles and practices of personnel management and supervision to effectively direct and manage and plan an area of responsibility and meet the mission of the Department of Corrections.
<b>K10</b>	Basic knowledge of the department's Equal Employment Opportunity (EEO) Program and the processes available to meet the Department's EEO objectives as it relates to the supervision and management of departmental personnel.
<b>K11</b>	Basic knowledge of a manager's role in the EEO program regarding regulations, processes, and objectives to promote the department's equal employment opportunity policies and goals in making hiring decisions and to provide a harassment free work environment.

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	<b>Skill to:</b>
<b>S1</b>	Skill in clearly communicating ideas effectively (verbal, written, and/or graphical) while maintaining cooperative relations with others in order to provide information or direction to staff and vendors, etc.
<b>S2</b>	Skill to analyze and interpret data and situations accurately in order to provide direction to staff, perform design work, write technical reports, provide alternatives and recommendations for management decisions and construction support, etc.
<b>S3</b>	Skill to prepare and accurately interpret and review plans, specifications, and estimates for lighting, power, control wiring, substation, low voltage, high voltage, etc., in order to provide direction to staff, information to institutions, contractors, other designers, suppliers, etc., for quality construction work and accurate as-built drawings.
<b>S4</b>	Skill to make correct computations in order to provide accurate information related to plans and specifications.
<b>S5</b>	Skill in preparing and maintaining electrical engineering records, notes, data, etc. to provide direction to staff, information and recommendations on a wide variety of issues.
<b>S6</b>	Skill to make neat and accurate lettering, drawings, and technical sketches in order to provide direction to staff and accurate information related to plans and specifications.
<b>S7</b>	Skill to direct or inspect field construction operations or make field inspections and tests of electrical installations in order to achieve conformity to plans and specifications during construction phase of project.
<b>S8</b>	Skill in prioritizing and organizing multiple projects and assignments in order to effectively meet schedules and provide direction to staff.
<b>S9</b>	<b>Skill in electrical design in order to provide direction to staff and produce construction documents that meet the needs of the program as well as the departmental design criteria guidelines and building codes.</b>
<b>S10</b>	<b>Skill in communicating (verbal, written, and/or graphical) project requirements in a training capacity to other members of the work unit to produce plans, specifications and reports on a wide variety of electrical projects.</b>

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<b>S11</b>	Skill to effectively contribute to the department's equal employment opportunity objectives in order to create and maintain a fair and equitable work environment free of harassment and discrimination.
<b>S12</b>	<b>Skill to operate a calculator and computer in order to access, enter, update, retrieve information and provide accurate information.</b>